



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/699,902

11/03/2003

Frank Eidam

BGEE 2 00025

4386

27885

7590

04/30/2008

FAY SHARPE LLP

1100 SUPERIOR AVENUE, SEVENTH FLOOR  
CLEVELAND, OH 44114

EXAMINER

BRITTAIN, JAMES R

ART UNIT

PAPER NUMBER

3677

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/699,902	<b>Applicant(s)</b> EIDAM, FRANK	
	<b>Examiner</b> JAMES R. BRITAIN	<b>Art Unit</b> 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7,9,11,12,32,34,35,38-40,64,66,67 and 70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,9,11,12,32,34,35,38-40,64,66,67 and 70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4, 5, 7, 9, 11, 12, 32, 34, 35, 38-40, 64, 66, 67 and 70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 9, 32, 64 and 70 indicate that in a process step after installation the radially inner zone is permanently plastically deformed. This process step provides no apparent claimed structure and there is no objective criteria set forth to determine from viewing the locking ring before or after installation whether there has been any permanent plastic deformation of the ring or how the ring will be changed after installation or what the initial configuration was before installation. It is unclear if the claim scope is considered to only exist to define an article (1) before installation, (2) during the process of plastically deforming the ring and not before or after the step of plastic deformation or (3) after installation. Applicant's claims are not directed to an article alone, but appear as a disguised form of process claims of installation and are clearly indefinite as to scope. The claims fail to serve notice of what structure comprises the article. The remaining claims are indefinite because they depend from indefinite claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3677

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 7, 9, 12, 32, 34, 64, 66, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerwien et al. (DE 19961709) in view of Euler (US 4364615) and further in view of either Bross (US 2975667) or Turbant et al. (FR 2821906).

Gerwien et al. (figures 1-3) teaches locking ring structure assembled in a groove 16 of a device having a shaft 9 comprising an outer edge zone 2 and a radially inner circumferentially interrupted engagement zone which slants at an angle between 15° and 45°. The difference is that the device has an interrupted outer edge and the angle of the inner zone isn't less than the angle of the outer zone. However, Euler (figures 1, 9) teaches that the use of a closed outer edge being conventional and either one of Bross or Turbant et al. teach that the angle of the inner zone can be less than the angle of the outer zone, so as to inherently provide desirable characteristics. Therefore, it would have been obvious to modify the locking ring of Gerwien et al. have a closed outer edge in view of Euler (figures 1, 9) teaching the use of a closed outer edge being conventional in those environments when unneeded and to further modify the locking ring of Gerwien et al. such that the angle of the inner zone is less than the angle of the outer zone would have been obvious in view of either Bross (figures 3, 4) or Turbant et al. (figure 1) who teach that it is desirable to provide such a configuration to a locking ring.

Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerwien et al. (DE 19961709) in view of Euler (US 4364615) and further in view of either Bross (US 2975667) or Turbant et al. (FR 2821906) as applied to claim 32 above, and further in view of Perrow (US 6390925).

Further modification of the device of Gerwien et al. such that the groove has a shoulder and is asymmetric would have been obvious in view of Perrow (figure 9) in which the groove for the locking ring is asymmetric, has a shoulder 60 and is non-rectangular with a tapered surface so as to more securely mount the locking ring.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerwien et al. (DE 19961709) in view of Euler (US 4364615) and further in view of either Bross (US 2975667) or Turbant et al. (FR 2821906) as applied to claim 9 above, and further in view of Draving (US 2275058).

Further modification of the locking ring of Gerwien et al. such that the inner and outer portions are at the same angle would have been obvious in view of Draving (figures 13, 14) that teaches the use of such a configuration to be old and well known.

Claims 5, 35 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerwien et al. (DE 19961709) in view of Euler (US 4364615) and further in view of either Bross (US 2975667) or Turbant et al. (FR 2821906) as applied to claims 1, 32 and 64 above, and further in view of McCarrick et al. (US 5713692).

Further modification of the locking ring of Gerwien et al. such that the slanting angle is between 0° and 20° would have been obvious in view of McCarrick et al. (figures 9, 10) in which the slanting angle of the inner portions 16 is within this range.

### ***Response to Arguments***

Applicant's arguments filed May 22, 2007 have been fully considered but they are not persuasive. Applicant presents arguments with respect to the process step of plastically deforming the ring. However, there is no structural limitation that imparts a different

Art Unit: 3677

configuration to the locking ring as indicated above. Therefore the argument is unpersuasive. Fundamentally, the claim construction is indefinite. While these claims are couched as article claims, the claim construction is such that an initial structure is provided and a process appears to be carried out on the initial structure resulting in a changed product. The scope of the article claims is therefore unclear and fails to serve notice to the public. This is highlighted by applicant's argument found in the remarks on page 10, ¶4, wherein "Independent claims 1, 9, 32 and 64, all recited wherein in the installed state the radially inner zone is permanently plastically deformed". This all comes back to the scope of the claims being indefinite. If these were process claims, the scope would readily be clear. However, these are article claims drawn to the ring alone so there is no clarity as to whether process of installation is also being claimed. The retaining rings of the applied art are not just elastic, but inherently have a yield point, too. There would inherently be some plastic deformation within the capabilities of the rings of the applied art. As to the motivation to combine the references, clearly the motivation doesn't have to be for the same reason as applicant's and the motivation can come from modifying the elastic properties of the ring, too. These rings can be used in the elastic range, too. Applicant doesn't claim the assembled state.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 3677

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES R. BRITTAIN whose telephone number is (571)272-7065. The examiner can normally be reached on M-F 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached on (571) 272-6987. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James R. Brittain/  
Primary Examiner, Art Unit 3677

JRB